

BACKGROUND

In 1997, Owens Corning (Plant #41) in Santa Clara submitted an application (#18028) to bank 504 TPY of NO_x emissions. The emission reductions claimed were the result of the elimination of the use of niter (sodium nitrate, NaNO₃) from its glass furnace. The applicant documented a reduction in niter use from 1,866,600 pounds per year to 1000 pounds per year. The applicant claimed that the niter dissociated under furnace conditions, and that all of the nitrogen was released and emitted in the form of NO₂. The stoichiometric conversion of nitrogen in the niter to NO₂ would result in emissions of 0.541 lbs NO₂/lb niter. See the engineering evaluation dated 5/4/99 for more information on the original request.

On June 3, 1999, the APCO denied the application. This denial was for three reasons:

1. Failure to quantify the emission reductions, as required by BAAQMD 2-2-201. Because of the magnitude of the requested reductions, District staff requested that the applicant perform a source test at the facility to confirm the emission calculations. The applicant refused. The applicant offered to pay the District's expenses to test another similar facility outside of California in order to confirm the applicant's emission calculation methodology. The District declined. As a result, the tests were never conducted, and the District did not empirically confirm the emission calculations.
2. The requested emission reduction credit was determined by the District to be "required by federal, state, or District laws, rules, and regulations." Specifically, the NO₂ emissions resulted in offsite odor impacts that had resulted in complaints. "The applicant's removal of niter from S-1 and S-19 is the direct result of actions Owens Corning took to meet its duty to comply with applicable regulatory requirements which prohibit public nuisance emissions and applicable regulatory requirements which limit odorous emissions." *Application 18028 Engineering Evaluation*, page 5. The APCO therefore determined that the emission reduction was required by District regulations, and therefore could not be banked, under 2-4-201.
3. The requested emission reduction technique used was determined by the District to be Reasonably Available Control Technology (as defined by BAAQMD 2-2-243), and therefore not bankable under 2-4-201. Based on cost data provided by the applicant, the voluntary reduction of niter was deemed to be technologically feasible and cost-effective.

The applicant appealed the denial of credits to the District's Hearing Board. The parties to the appeal agreed to argue the three bases for denial sequentially, and to end the appeal if the APCO prevailed on any of the issues. The first issue

argued was issue 2, above. The APCO prevailed, and the appeal was denied. In an order dated May 11, 2000, the Hearing Board stated that “the Appellant [Owens Corning] has not sustained its burden of proving that the APCO’s action in refusing the banking application was not proper.”

The applicant sought review of the Hearing Board’s determination in Santa Clara County Superior Court. In a Notice of Ruling dated September 22, 2003, the Court found that “respondent(s) erred in concluding that petitioner’s NOx emission reduction resulted from actions taken by petitioner to comply with applicable regulatory requirements governing odorous emissions.” The court remanded the application to the Hearing Board to review the other two grounds for denial.

REVISED EVALUATION

District staff has reviewed the original application and the basis for denial and have revised the recommendation for denial of the application. Staff now recommends approval of Application 18028 in the amount of 504 TPY NOx.

Quantification

District staff have reviewed the information submitted by the applicant concerning the theoretical basis for its claim that 100% of the nitrogen in niter is emitted as NO₂, and agree with its conclusion. Although empirical confirmation under the actual operating conditions at the facility would be preferable, it is not necessary. It would be expensive to conduct a test, and would possibly result in offsite odor impacts, as well as the unnecessary emission of a ton or more of NOx. The chemistry of dissociation of niter at the furnace conditions is well understood and adequately documented. There is no evidence to indicate that some of the niter would be unreacted, or encapsulated in the molten glass. EPA has assessed NOx emissions from the use of niter in glass manufacture, and has determined “[t]he evolution of NO₂ from the nitrates is essentially stoichiometric, i.e., all NO₂ present in the nitrate is released in the furnace.” *Alternative Control Techniques Document—NO Emissions from Glass Manufacturing*, EPA-453/R-94-037, p.4-8. As a result, staff now recommend that the applicant’s quantification of emission reductions be accepted.

RACT

The definition of RACT appears to require the same case-by-case analysis used to determine BACT:

2-1-209 Reasonably Available Control Technology (RACT): For sources which are to continue operating, RACT is the lowest emission limit that can be achieved by the specific source by the application of control technology taking into account technological feasibility and cost-effectiveness, and the specific design features or extent of necessary modifications to the source. For sources which are or will be shutdown, RACT is the lowest emission limit that can be achieved by the application of control technology to similar, but not necessarily identical categories of sources,

taking into account technological feasibility and cost-effectiveness of the application of the control technology to the category of sources only and not to the shut-down source.

This definition, however, has never been interpreted to require a case-by-case evaluation of technological feasibility or cost-effectiveness. Instead, the definition has always been interpreted to require the District to consult EPA's Control Technology Guidelines (CTGs) before granting emission reduction credits. These guidelines were prepared to provide guidance to state and local agencies in preparing their attainment plans, and set a national floor for reasonable retrofit requirements. The basic idea was that, even when a local agency has not adopted a regulation imposing control requirements on a specific source, the agency shouldn't grant credits for emissions above national guidelines.

In fact, the argument that RACT requires a top-down analysis similar to the BACT analysis can be seen to make emission reductions a nullity. If, by definition, emission reductions that are cost-effective are RACT; and if a business is reasonable, and only voluntarily makes reductions that are cost-effective; the inevitable conclusion is that a business will never make emission reductions that can be banked.

In 1999, at the time of the APCO's decision to deny the Owens Corning application, there was no national guidance on the use of niter in fiberglass manufacturing. As a result, the determination by the APCO that the emission reduction was RACT was not correct.

CONCLUSION/RECOMMENDATION

District staff has reviewed the grounds for denial of application 18028, and has revised its recommendation. Staff now recommends approval of the request, and granting of credit in the amount of 504 TPY NOx.

Steve Hill
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